rendered drawings that can be filled in using, for example, crayons or markers. A video coloring book generates or includes one or more line-rendered portions or aspects of a video that can be filled in using, for example, image modifying software. As an option, the line-rendered portions can have other modifications performed to them as well. A video coloring book can be viewed as an extension of the conventional coloring book to video. Software to implement a video coloring book according to the invention can edit camera-motion layers and/or fixed-frame layers. The camera-motion layers for a video coloring book can be obtained from a video sequence or from an image. Examples such as image are the same examples described for block 34. Software to implement a video coloring book according to the invention can be embodied on a computer-readable medium and distributed accordingly or can be embodied on a computer system as part of a web site and accessed via a network, such as the Internet.

[96] An example of a video coloring book is illustrated with Figures 8-11. Figure 8 illustrates an example of a frame of an original video sequence obtained in block 11 of Figure 2. In block 12, the original video sequence is decomposed to obtain a camera-motion layer and zero or more fixed-frame layers. In blocks 21 and 22, the camera-motion layer is converted to an original image and rectified. Figure 9 illustrates an example of the rectified image for the camera-motion layer obtained from the frame of Figure 8. In block 23, an edge operation is performed to the rectified image in Figure 9, and the edge image illustrated in Figure 10 results. In block 24, the edge image of Figure 10 is edited to obtain a modified image, and the modified image of Figure 11 results. In this example, the edge image is edited according to block 31. For instance, a jack-o-lantern, a dog caricature, and a present are inserted; the building on the left, the pot for the plant, and the sidewalk are colored in; and a stick figure of a person with a balloon "Hi Mom" are inserted. In blocks 25 and 26, the modified image is rectified and converted to a

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modified camera-motion layer. In blocks 15-18, a composite modified video sequence is obtained from the modified camera-motion layer.

[97] Extending the example, other modifications to the edge image of Figure 10 can be performed according any of the techniques illustrated in Figure 4. For instance, instead of inserting the balloon "Hi Mom," an audio source for "Hi Mom" can be inserted and activated by a mouse passing over the stick figure according to block 38. Instead of the stick figure, a video sequence of the person who edited the edge image can be inserted according to block 35. Instead of keeping the camera motion parameters of the original video sequence, the camera motion parameters can be modified according to block 46 such that the camera hovers over the fire hydrant and the dog caricature.

[98] Extending the example further, the original fixed-frame layers of the original video sequence can be modified to obtain modified fixed-frame layers as per block 14.

[99] The embodiments and examples discussed herein are non-limiting examples.

[100] The invention is described in detail with respect to preferred embodiments, and it will now be apparent from the foregoing to those skilled in the art that changes and modifications may be made without departing from the invention in its broader aspects, and the invention, therefore, as defined in the claims is intended to cover all such changes and modifications as fall within the true spirit of the invention.

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